UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

January 11, 2013

VIA EMAIL (mailto:jerry.c.winslow@xcelenergy.com)

Jerry Winslow
Principal Environmental Engineer
Xcel Energy
414 Nicollet Mall, MP 7A
Minneapolis, MN 55401

Re: Ashland Lakefront Site – Sediment Data Gap Analysis

Dear Mr. Winslow:

This is to follow-up on the discussion that took place at the meeting on January 7, 2013 in Madison, Wisconsin, between the Northern States Power Company of Wisconsin ("NSPW") and the Wisconsin Department of Natural Resources ("WDNR"), to discuss NSPW's proposal for a confined disposal facility ("CDF") within Chequamegon Bay for the contaminated sediments at the Ashland/Northern States Power Lakefront Site. The U.S. Environmental Protection Agency ("EPA") participated by telephone. NSPW proposed the CDF as an alternative to the selected sediment remedy for the Site. NSPW has stated to EPA, WDNR and the public that the selected sediment remedy cannot be safely or effectively implemented due to concerns with basal heave and other engineering concerns. The selected sediment remedy, as fully described and documented in the Record of Decision ("ROD"), dated September 30, 2010, is a dry excavation of the near shore sediments combined with a wet dredge of the offshore sediments (referred to as the "hybrid remedy"). Basal heave shear instability purportedly associated with the dry excavation portion of the hybrid remedy was raised by NSPW during the public comment period on the Proposed Plan, and after completion of the Feasibility Study, and again at the meeting with EPA and WDNR in Chicago on October 15, 2012. NSPW's concerns are documented in your submittal to EPA dated October 15, 2012, including the reports by Anchor QEA, Gradient and Burns & McDonnell.

EPA and WDNR take these issues very seriously and continue to review the reports and concerns raised by NSPW regarding the hybrid remedy. As EPA mentioned during the January 7th meeting, we have requested that the U.S. Army Corps of Engineers review the issues NSPW and its contractors have raised regarding basal heave shear instability. EPA will forward the Army Corps of Engineers' analysis to you as soon as it is finalized. From our review of NSPW's October 15th submittal, and discussions with the Army Corps of Engineers and WDNR, however, EPA has concluded that there is not enough data in the near shore area of Chequamegon Bay (the area within 200 feet of the shoreline) to fully evaluate the issues NSPW has raised to determine that the hybrid remedy cannot be safely and effectively implemented. Typically this issue would be fully considered during the remedial design process. In this case, given NSPW's emphasis on the issue, we are willing to address it now, before remedial design begins. In order to fully

evaluate these issues, EPA and WDNR have concluded that 18 sediment core samples are needed in the near shore area of the bay. The borings must be advanced to a depth adequate to assess the thickness and properties of the Miller Creek Formation relevant to potential construction related failures including basal heave. The attached map of the bay shows the proposed locations for the 18 borings.

The Data Gap Investigation Report for Ashland/NSPW Lakefront Site (July 2011), prepared by Burns & McDonnell for NSPW, is based on borings taken by Coleman Engineering and the near shore borings were not advanced deep enough to penetrate the Miller Creek formation. The near shore borings were advanced to around 15' depth, or about 5' into the Miller Creek. Three borings located beyond 150 feet (SD-121 (36' depth), SD-122 (33' depth) and SD-123 (39' depth) were advanced to depth and indicate a competent Miller Creek formation. The borings in the near shore area that would be part of the dry excavation under the hybrid remedy, however, do not provide the data that are critical to evaluate the undrained shear strength of the aquitard materials.

EPA proposes that NSPW advance the 18 soil borings to fully penetrate the full depth of the aquitard materials and conduct proper laboratory tests to measure the undrained strength of these materials. Please confirm by January 25th NSPW's willingness to perform the data gap analysis. NSPW should prepare and submit to EPA a work plan for the proposed data gap analysis as soon as possible so that the borings can be taken this winter through the ice as we discussed during the January 7th meeting. If NSPW chooses not to perform the data gap analysis as described in this letter, WDNR is prepared to do the sampling.

We appreciate NSPW's cooperation and willingness to perform the data gaps analysis to fully evaluate the safety and implementation concerns it has raised with the selected sediment remedy.

Sincerely,

Scott Hansen

Scott Hansen
Remedial Project Manager

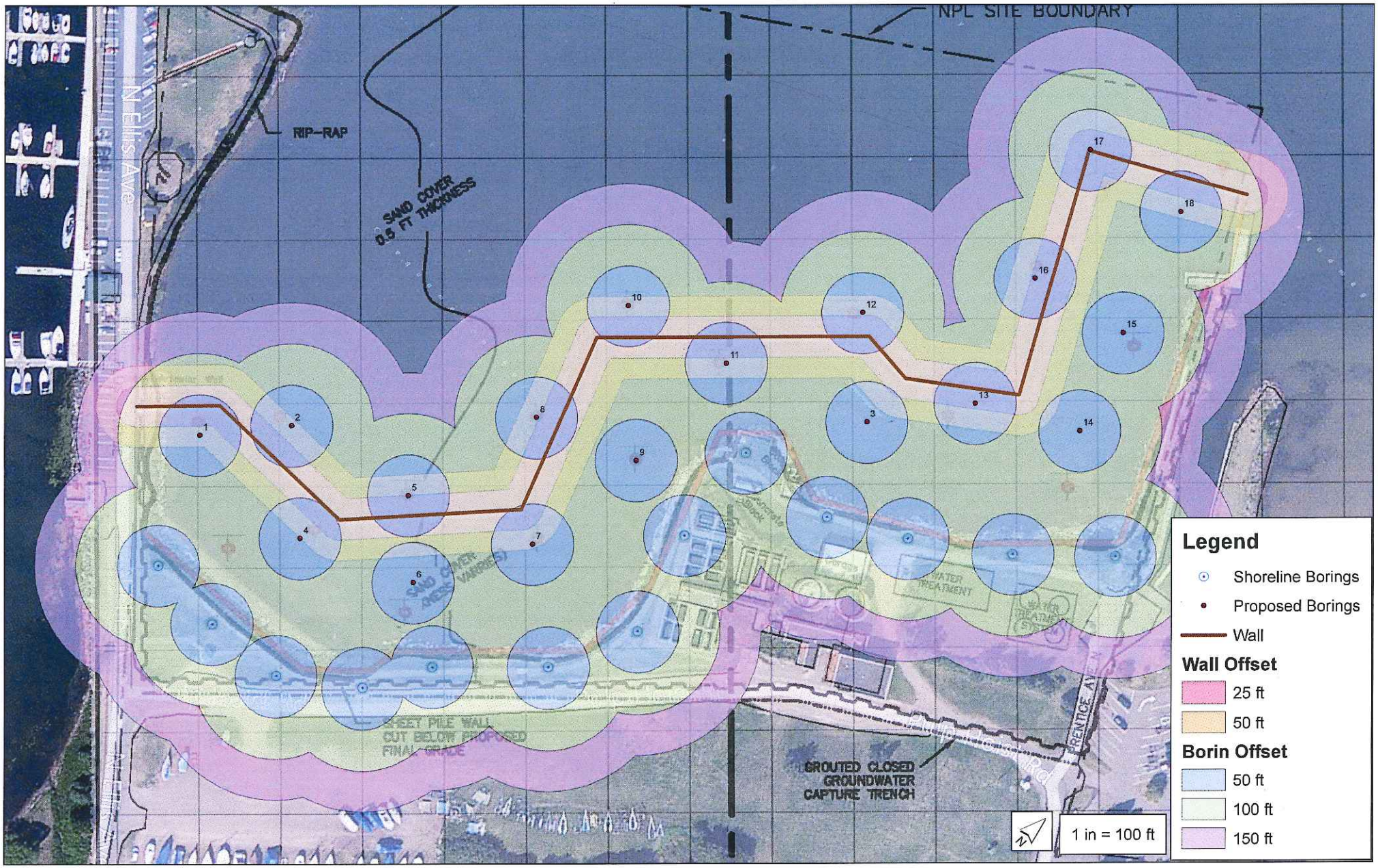
encl.

cc: Kelly Richardson, NSPW
(Email: Kelly.Richardson@LW.com)

Jamie Dunn, WDNR

Lacey Cochart, WDNR

Thomas Benson, U.S. DOJ


NPL SITE BOUNDARY
RIP-RAP
SAND COVER
0.5 FT THICKNESS
N Ellis Ave
SHEET PILE WALL
CUT BELOW PROPOSED
FINAL GRADE
GROUTED CLOSED
GROUNDWATER
CAPTURE TRENCH
WATER
TREATMENT
1 in = 100 ft
Legend
Shoreline Borings
Proposed Borings
Wall
Wall Offset
25 ft
50 ft
Borin Offset
50 ft
100 ft
150 ft